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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/743,097	12/23/2003	Judith M. Vandewinckel	117545	8003

27074 7590 03/31/2006

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EXAMINER

RODEE, CHRISTOPHER D

ART UNIT	PAPER NUMBER
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1756

DATE MAILED: 03/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/743,097

Applicant(s)

VANDEWINCKEL ET AL.

Examiner

Christopher RoDee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☒ Interview Summary (PTO-413)
Paper No(s)/Mail Date 2/9/06.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

Claims 1-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As discussed in the last Office action, claims 1-19 specify "cohesion" of the toner particles of from about 55 to about 98 %. Cohesion is a numerical value. The claims do not provide any definition of the term or of how to calculate or measure this value. As a result, the artisan would look to the specification for guidance. The specification guidance does not describe the manner of determining the cohesion value with sufficient particularity so that the artisan would be reasonably apprised of the claimed "cohesion" value. As a result, the claimed cohesion is indefinite.

Applicants traverse this rejection based on the disclosure of ¶ [0034]. In connection with this passage applicants state, "cohesivity can be measured by placing a known mass of toner on top of a set of three screens and vibrating the screens and toner for a fixed time (115 seconds) at a fixed vibration amplitude (1 millimeter), and then a toner cohesion value can be obtained based on the amount of toner remaining on each of the screens at the end of the vibration time. In addition, as explained in paragraph (0034) of the specification, a cohesion value of 100% corresponds to all of the toner remaining on the top screen at the end of the vibration step, i.e., no toner passes through all three screens, and a cohesion value of zero corresponds to all of the toner passing through all three screens."

The Examiner referred applicants to this passage in the last Office action. As noted in the last Office action, "Cohesion is discussed in the specification in ¶ [0034] as being measured

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by placing a known amount of toner (e.g., two grams) on a sieve with three screens having meshes of, for example, 53 microns, 45 microns, and 38 microns in order from top to bottom. The sieve is shaken under conditions, such as 115 seconds at a 1 millimeter vibration amplitude. The toner cohesion value is related to the amount of toner remaining on the screens at the end of the time. A cohesion value of 100% corresponds to all of the toner remaining on the top screen at the end of the vibration step and a cohesion value of zero corresponds to all of the toner passing through all three screens, that is, no toner remaining on any of the three screens at the end of the vibration step. The higher the cohesion values the lesser the flowability of the toner. The cohesion value appears to be a result of not only the toner but the mesh sizes of the sieves, the time of vibration, the amplitude of vibration, and the number of sieves." The characteristics of vibration time, toner amount, vibration amplitude, and screen size are all given in the specification as examples. The specification describes these characteristics by qualifiers "such as", "for example", and "e.g.". The specification description does not particularly point out what the vibration time, toner amount, vibration amplitude, and screen sizes are. Rather it provides non-limiting examples. The person of ordinary skill would not see the described features as limiting the cohesion measurement. Rather, the skilled artisan would see these as examples of parameters that can be varied or changed. Thus the specification does not provide a reasonable limitation to these parameters. Further, and as described in the last Office action, the specification fails to provide a reasonable manner of determining how much of the toner needs to be retained on any one, all, or some combination of screens in order to obtain a cohesion value according to the claims. The Examiner is in agreement that a cohesion value of 100% corresponds to all of the toner remaining on the top screen at the end of the vibration step, i.e., no toner passes through all three screens, and a cohesion value of zero corresponds to all of the toner passing through all three screens.

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However, what is not clear is how the cohesion value is determined when less than all of the toner is retained on the top screen or when not all toner passes through all the screens.

Applicants have also relied upon a prior art reference to Combes to show that cohesion is a known measurement in the toner art. Applicants refer the Examiner to column 48, lines 21-44. This passage states,

“ The particle flow values of the toner particles were measured with a Hosokawa Micron Powder tester by applying a 1 millimeter vibration for 90 seconds to 2 grams of the toner particles on a set of stacked screens. The top screen contained 150 micron openings, the middle screen contained 75 micron openings, and the bottom screen contained 45 micron openings. The percent cohesion is calculated as follows:

$$\% \text{ cohesion} = 50A + 30B + 10C$$

wherein A is the mass of toner remaining on the 150 micron screen, B is the mass of toner remaining on the 75 micron screen, and C is the mass of toner remaining on the 45 micron screen. (The equation applies a weighting factor proportional to screen size.) This test method is further described in, for example, R. Veregin and R. Bartha, Proceedings of IS&T 14th International Congress on Advances in Non-Impact Printing Technologies, pg 358-361, 1998, Toronto, the disclosure of which is totally incorporated herein by reference. For the toners, the input energy applied to the apparatus of 300 millivolts was decreased to 50 millivolts to increase the sensitivity of the test. The lower the percent cohesion value, the better the toner flowability. “

Rather than resolve the issues raised in the last Office action by showing reasonable guidance in the art, this citation further shows that the claims are indefinite. In the Combes document cohesion's vibration time is different from that used in the specification. The screen sizes are also significantly different: 150, 75, and 45 μm in the Combes reference; 53, 45, and 38 μm in the specification. Clearly different sized screens are known to be used in the art as shown by the specification and Combes, and the artisan would expect far different amounts of the toner to be retained on a Combes screens (e.g., 150 μm screen) as compared to any of the screens in the specification (e.g., 38 μm screen). Further, Combes provides a formula for

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determining the % cohesion. There is no indication in the specification that the amount of toner on each screen is measured and multiplied by a factor, and there is no indication that the formula of Combes, which is used for different screen sizes, can be used with the specification screen sizes when measuring cohesion. The specification also does not reference Combes or incorporate the document by reference for its measurement of cohesion. Combes cannot be relied upon to show that the determination of cohesion is well known in the art and does not render the claims definite, particularly where the characteristics of measurement are different between the reference and the specification.

The claims remain indefinite for the reasons given in the last Office action and as expanded upon above.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher RoDee whose telephone number is 571-272-1388. The examiner can normally be reached on most weekdays from 6:00 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

cdr
28 March 2006



CHRISTOPHER RODEE
PRIMARY EXAMINER